

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A method of matching a Uniform Resource Locator (URL) to a resource or rule, comprising:

progressively hashing a clause of the URL, character by character, individually, to generate a hash code [[for]] associated with the clause;

determining if a delimiting character is encountered;

using the hash code associated with the clause to traverse a tree data structure representing clauses of URLs and corresponding resources or rules, wherein each node of the tree data structure has an associated multidimensional hash table; and

matching the URL to resources or rules based on the traversing of the tree data structure.

2. (Original) The method of claim 1, wherein using the hash code includes calculating a target value based on the hash code and dimensions of a multidimensional hash table associated with a current node in the tree data structure.

3. (Original) The method of claim 2, wherein using the hash code further includes using the target value to identify an entry in the multidimensional hash table corresponding to a subtree associated with the clause.

4. (Original) The method of claim 3, wherein traversing the tree data structure includes setting the current node of the tree data structure to be a root node of the subtree associated with the clause.

5. (Original) The method of claim 2, wherein entries for subtrees in the multidimensional hash table are positioned in the multidimensional hash table using the equation:

$$\text{Th } \gamma\{ (\text{h}\%X), (\text{h}\%Y), (\text{h}\%Z) \}$$

wherein Th is a target object in the multidimensional hash table, h is a hash value for a root node of a subtree, and X, Y and Z are dimensions of the multidimensional hash table.

6. (Original) The method of claim 2, wherein the multidimensional hash table is created by growing the multidimensional hash table such that hash collisions are avoided.
7. (Original) The method of claim 6, wherein the multidimensional hash table is grown by a total number of dimensions for the multidimensional.
8. (Original) The method of claim 4, further comprising:
searching the current node for target resources or rules; and
adding any target resources or rules to a list of matched resources or rules.
9. (Original) The method of claim 4, further comprising:
determining if there are any child nodes of the current node corresponding to a "wildcard" node;
and
adding any target resources or rules associated with the "wildcard" node to a list of matched resources or rules.
10. (Original) The method of claim 1, further comprising:
returning a list of matched resources or rules to a calling application.
11. (Currently Amended) A computer program product ~~in a computer readable medium~~ for matching a Uniform Resource Locator (URL) to a resource or rule, the computer program product comprising:
a computer readable storage medium comprising computer readable instructions, the computer readable instructions comprising:
first instructions for progressively hashing a clause of the URL, character by character individually, to generate a hash code [[for]] associated with the clause;
second instructions for determining if a delimiting character is encountered;
third instructions for using the hash code associated with the clause to traverse a tree data structure representing clauses of URLs and corresponding resources or rules, wherein each node of the tree data structure has an associated multidimensional hash table; and
fourth instructions for matching the URL to resources or rules based on the traversing of the tree data structure.

12. (Original) The computer program product of claim 11, wherein the third instructions for using the hash code include instructions for calculating a target value based on the hash code and dimensions of a multidimensional hash table associated with a current node in the tree data structure.

13. (Original) The computer program product of claim 12, wherein the third instructions for using the hash code further include instructions for using the target value to identify an entry in the multidimensional hash table corresponding to a subtree associated with the clause.

14. (Original) The computer program product of claim 13, wherein the tree data structure is traversed by setting the current node of the tree data structure to be a root node of the subtree associated with the clause.

15. (Original) The computer program product of claim 12, wherein entries for subtrees in the multidimensional hash table are positioned in the multidimensional hash table using the equation:

$$\text{Th } \gamma \{ (h\%X), (h\%Y), (h\%Z) \}$$

wherein Th is a target object in the multidimensional hash table, h is a hash value for a root node of a subtree, and X, Y and Z are dimensions of the multidimensional hash table.

16. (Original) The computer program product of claim 12, wherein the multidimensional hash table is created by growing the multidimensional hash table such that hash collisions are avoided.

17. (Original) The computer program product of claim 16, wherein the multidimensional hash table is grown by a total number of dimensions for the multidimensional.

18. (Original) The computer program product of claim 14, further comprising:
fifth instructions for searching the current node for target resources or rules; and
sixth instructions for adding any target resources or rules to a list of matched resources or rules.

19. (Currently Amended) The computer program product of claim 14, further comprising:
fifth sub- instructions for determining if there are any child nodes of the current node corresponding to a "wildcard" node; and

sixth sub-instructions for adding any target resources or rules associated with the "wildcard" node to a list of matched resources or rules.

20. (Currently Amended) An apparatus for matching a Uniform Resource Locator (URL) to a resource or rule, comprising:

a bus;

a memory connected to the bus, wherein the memory comprises computer executable instructions
directing the apparatus to:

means for progressively hashing progressively hash a clause of the URL, character by character individually, to generate a hash code [[for]] associated with the clause;

means for determining determine if a delimiting character is encountered;

means for using use the hash code associated with the clause to traverse a tree data structure representing clauses of URLs and corresponding resources or rules, wherein each node of the tree data structure has an associated multidimensional hash table; and

means for matching match the URL to resources or rules based on the traversing of the tree data structure.